

INCH-POUND

MS24659G

18 April 2011

SUPERSEDING

MS24659F

28 September 1987

## DETAIL SPECIFICATION SHEET

### SWITCH, TOGGLE, FOUR POLE, ENVIRONMENTALLY SEALED, LEVER LOCK

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for acquiring the switch described herein shall consist of this specification and the latest issue of MIL-DTL-3950.

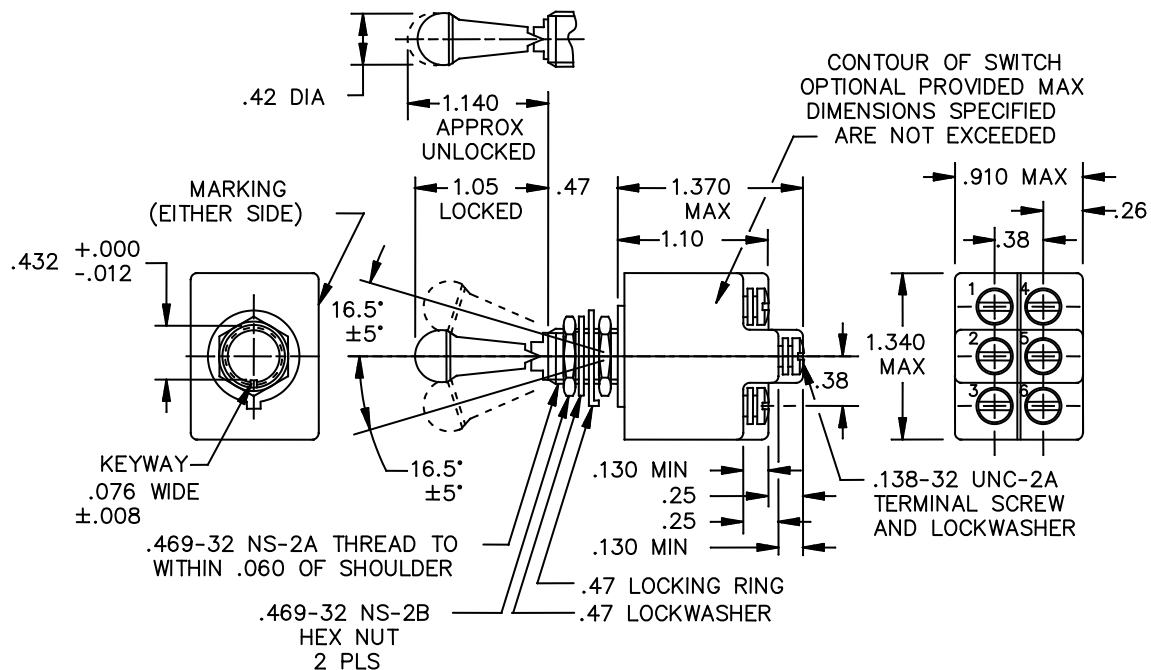


FIGURE1. Dimensions and configuration

Inches	mm	Inches	mm
.005	0.13	.42	10.7
.008	0.20	.432	10.97
.012	0.30	.47	11.9
.020	0.51	.910	23.11
.060	1.52	1.05	26.7
.076	1.93	1.10	27.9
.130	3.30	1.140	28.96
.25	6.4	1.340	34.04
.26	6.6	1.370	34.80
.38	9.7		

## NOTES:

1. Dimensions are inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is  $\pm .020$  (0.51 mm) for two place decimals and  $\pm .005$  (0.13 mm) for three place decimals.
4. For hardware and terminal screw detail specifications, see appendix of MIL-DTL-3950.
5. In event of a conflict between the text of this standard and the reference cited herein, the text of this standard shall take precedence.

FIGURE1. Dimensions and configuration - Continued

## REQUIREMENTS

All switches on this standard are designed so that the movement of the switch mechanism is opposite to that of the toggle lever.

Locking arrangement Positive locking shall be accomplished and shall prevent motion of the toggle lever until the locking mechanism is manually released.

The force required to release the locking mechanism shall be 3 to 5 pounds.

The locking means at the top of the toggle bushing shall be capable of withstanding a torque of 20 inch-pounds applied in both directions immediately following the humidity test.

Part number example MS24659-21A (locking combination 'A').

Maximum weight is 0.15 pound.

Electrical rating: See table I.

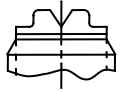
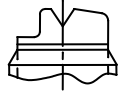
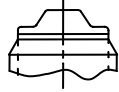
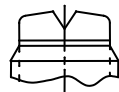
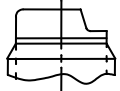
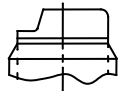
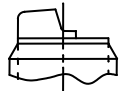
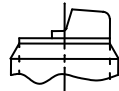
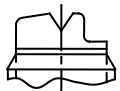
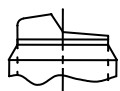
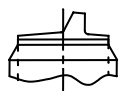
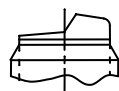
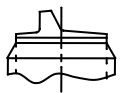
<p>A</p>  <p>LOCKED IN THREE POSITIONS</p>	<p>B</p>  <p>LOCKED IN CENTER AND DOWN POSITIONS (KEYING SIDE)</p>	<p>D</p>  <p>LOCKED OUT OF CENTER POSITION</p>	<p>E</p>  <p>LOCKED IN CENTER POSITION</p>
<p>F</p>  <p>LOCKED IN UP POSITION (OPPOSITE KEYING)</p>	<p>G</p>  <p>LOCKED IN DOWN POSITION (KEYING SIDE)</p>	<p>H</p>  <p>LOCKED OUT OF CENTER AND DOWN POSITION (KEYING SIDE)</p>	<p>J</p>  <p>LOCKED OUT OF CENTER AND UP POSITION (OPPOSITE KEYING)</p>
<p>K</p>  <p>LOCKED IN CENTER AND UP POSITION (OPPOSITE KEYING)</p>	<p>L</p>  <p>LOCKED OUT OF DOWN POSITION (KEYING SIDE)</p>	<p>M</p>  <p>LOCKED OUT OF AND INTO UP POSITION (OPPOSITE KEYING)</p>	<p>N</p>  <p>LOCKED OUT OF UP POSITION (OPPOSITE KEYING)</p>
<p>P</p>  <p>LOCKED OUT OF AND INTO DOWN POSITION (KEYING SIDE)</p>	<p>FIGURES A THRU P DO NOT REPRESENT DETAILS OF CONSTRUCTION. THEY SCHEMATICALLY ILLUSTRATE LOCKING CONFIGURATIONS AND MOMENTARY POSITIONS</p>		

FIGURE 2. LOCKING COMBINATIONS.

TABLE I. Detail Requirements.

MS part No.	Available locking combinations	Circuit with Toggle Lever In			Current capacity (amperes) 28 volts DC			Current capacity(amperes) 115 volts, 60 and 400 Hertz AC		
		Keying side	Center	Opposite keying side	Lamp-Load circuit	Resistive circuit	Inductive circuit	Lamp-Load circuit	Resistive circuit	Inductive circuit
MS24659-21	All	1-2 On 4-5	Off	2-3 On 5-6	7	20	15	4	15	15
MS24659-22	D,F,G	Off	None	2-3 On 5-6						
MS24659-23	D,F,G	1-2 On 4-5	None	2-3 On 5-6						
MS24659-24	E,F,K,M	None	Off	2-3 On 5-6						
MS24659-25	F	None	Mom. Off	2-3 On 5-6	5	18	10	2	11	8
MS24659-26	F	Mom. 1-2 On 4-5	None	2-3 On 5-6						
MS24659-27	E,L,N	Mom. 1-2 On 4-5	Off	Mom. 2-3 On 5-6						
MS24659-28	E	Mom. 1-2 On 4-5	Off	None						
MS24659-29	F	Mom. Off	None	2-3 On 5-6						
MS24659-30	F	Mom. 1-2 On 4-5	None	Off						
MS24659-31	E,F,K,L,M,N	Mom. 1-2 On 4-5	Off	2-3 On 5-6						
MS24659-32	E	None	1-2 On 4-5	Mom. 2-3 On 5-6						
MS24659-33	E,F,K,M	None	1-2 On 4-5	2-3 On 5-6	7	20	15	4	15	15

Referenced documents

MIL-DTL-3950

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:

Army – CR  
Navy – AS  
Air Force – 85  
DLA – CC

Preparing activity  
DLA – CC

(Project 5930-2011-048)

Review activities

Army – AR, AV, MI  
Navy – EC, MC  
Air Force – 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.daps.dla.mil/>.